

NEURODIAGNOSTICS AND SLEEP SCIENCE (NDSS)

Additional Resources

- Catalog Course Search (<https://catalog.unc.edu/course-search/>)
- Course Numbering Guide (<https://catalog.unc.edu/courses/course-numbering/>)
- Scheduled Classes (<https://reports.unc.edu/class-search/>)
- Historical Course Record (https://reports.unc.edu/historical_course_record/)

Courses

NDSS 393. Clinical rotation in Neurophysiology and Polysomnography. 2 Credits.

Students will be exposed to real life clinical neurophysiology and sleep laboratory practice and develop competence in the performance of these studies in the clinical setting. Students should apply the knowledge and skills necessary to perform basic neurophysiological and sleep studies, including recording and interpreting basic studies. Upon completion, students should be able to demonstrate competence performing these studies. Students will discuss the cases, review waveforms, and identify events with clinical mentors.

Rules & Requirements

Requisites: Prerequisite, NDSS 415L.

Grading Status: Letter grade.

NDSS 400. NDSS UNCC Participants. 0 Credits.

Rules & Requirements

Repeat Rules: May be repeated for credit.

Grading Status: Letter grade.

NDSS 401. Basic Neurophysiology and Sleep for Clinical Neurophysiology. 3 Credits.

This course provides a concentrated study of anatomy and physiology essential to the practice of neurodiagnostics and polysomnography. Emphasis is placed on the physiology of the nervous, cardiovascular, and pulmonary systems and basic pharmacological principles. Upon completion, students should be able to demonstrate competence in concepts through written evaluation.

Rules & Requirements

Requisites: Prerequisite, A biology course above 100.

Grading Status: Letter grade.

NDSS 410. Intro to Basic Sleep and Neurophysiology Instrumentation and Technology. 4 Credits.

This course introduces fundamental concepts of NDSS equipment and recording of bio-electric potentials. Topics include concepts of basic electronics and instrumentation, key features of recording bio-electric potentials, function and application of neurodiagnostic equipment, construction of montages, display mechanisms, limitations of the recordings and essential clinical settings for the recording. Upon completion, students should be able to demonstrate basic competence in understanding neurodiagnostics and polysomnography and bio potentials.

Rules & Requirements

Grading Status: Letter grade.

NDSS 415L. Polysomnographic and Neurophysiologic Technology/ Lab. 7 Credits.

This course provides practical application of theories covered in the basic instrumentation course. Emphasis is placed on NDSS procedures. Students will have a hands-on laboratory practice and develop competence, knowledge and skills to perform these studies. Students will extend their understanding through application and review of clinical cases. Upon completion, students should be able to successfully complete practice lab exams and competencies.

Rules & Requirements

Requisites: Prerequisite, NDSS 410.

Grading Status: Letter grade.

NDSS 420. Pathophysiology of Sleep, Neurological, and Related Disorders. 3 Credits.

Students will learn about diseases affecting the nervous system, the sleep/wake cycle, and psychiatric and behavioral disorders. Topics include etiology, clinical manifestations, pharmacology, disease prevention, and overview of treatments. Restricted to NDSS Majors, Advanced undergraduates (instructor permission required).

Rules & Requirements

Grading Status: Letter grade.

NDSS 430. Neurological and Sleep Diagnostic and Therapeutic Methods, and Monitoring. 3 Credits.

Students will learn about services available at sleep and neurophysiology laboratories and interpretation of diagnostic findings. Topics include sleep procedures, electroencephalography, and long-term epilepsy monitoring. Students participate in laboratory practice sessions. Restricted to NDSS Majors, Advanced undergraduates (instructor permission required).

Rules & Requirements

Grading Status: Letter grade.

NDSS 440. Evidence Based Practice in Neurodiagnostics and Sleep Science. 3 Credits.

Admittance into NDSS program required. An Introduction to the concept of evidence-based practice and an opportunity to acquire the skills necessary to be able to incorporate evidence and best practices into professional work. These include an understanding of research methods and the approach to critical appraisal of research literature. (Fall, On demand).

Rules & Requirements

Grading Status: Letter grade.

NDSS 450. Advanced Sleep and Neurodiagnostic Clinical Procedures. 3 Credits.

Students will learn advanced procedures performed in sleep centers and neurophysiology laboratories. Topics include nerve conduction velocities, actigraphy, and autonomic testing techniques. Students participate in laboratory practice sessions. Restricted to NDSS Majors, Advanced undergraduates (instructor permission required).

Rules & Requirements

Grading Status: Letter grade.

NDSS 460. Informational Technology and Analytics in Neurodiagnostics and Sleep Science. 3 Credits.

A study and focus on information technology and analytics used specifically in Neurodiagnostics and Sleep Science. Emphasis is placed on development of the knowledge and competencies necessary for selective use and evaluation of research, data acquisition, computer transfer of acquisition studies, acquisition interpretations, and data management in the healthcare of Neurodiagnostic and Sleep Science patients.

Rules & Requirements

Grading Status: Letter grade.

NDSS 493. Neurodiagnostics and Sleep Science Practicum. 3 Credits.

Sleep disorders center and clinical neurophysiology laboratory clinical experience. Students participate in direct working experience in clinical neurophysiology and sleep laboratories (note that students may not be substituted as staff). Students may participate in practicum rotations in private practices and acute care centers accredited by the American Academy of Sleep Medicine and/or The American Board of Registration of Electroencephalographic and Evoked Potential Technologists, or other accreditation as deemed appropriate by the instructor. Majors only.

Rules & Requirements

Requisites: Pre- or corequisites, NDSS 420 and 430.

Grading Status: Letter grade.

NDSS 500. Principals and Practice of Healthcare Education. 3 Credits.

This course provides a foundation in the principles and practice of healthcare education. Topics include the educational process, learner characteristics, and teaching and learning theories, techniques, and strategies. Restricted to NDSS Majors, Advanced undergraduates (instructor permission required).

Rules & Requirements

Grading Status: Letter grade.

NDSS 510. Program Administration: Neurodiagnostics and Sleep Science Department Management. 3 Credits.

Admittance in to NDSS program required. Students will be introduced to the concepts of project development and management related to Neurodiagnostics and Sleep Science. Administration, financial, human resources, legal and policy concepts and issues in outpatient, public, and private sector settings. Topics and emphasis may vary. Students will be required to solve a clinical question using an inter-professional team-based approach.

Rules & Requirements

Grading Status: Letter grade.

NDSS 520. Advanced Physiological Monitoring and Data Acquisition. 3 Credits.

Students will learn advanced clinical procedures performed in clinical neurophysiology laboratories and operating rooms. Topics include evoked potentials, nerve conduction studies, autonomic testing, and intraoperative neurophysiologic monitoring. Students participate in laboratory practice sessions. NDSS majors only.

Rules & Requirements

Grading Status: Letter grade.

NDSS 530. Leadership in Healthcare Organizations. 3 Credits.

Admittance into NDSS program required. This course focuses on the theories and practices of leadership in health care. Global, social, legal, political, economic, and ethical issues are explored.

Rules & Requirements

Requisites: Prerequisite, NDSS 510 with a grade of C or higher.

Grading Status: Letter grade.

NDSS 593. Neurodiagnostics and Sleep Science Internship. 3 Credits.

Sleep and Clinical neurophysiology laboratory educational and management internship with mentoring component. Direct working experience in one or more of the following setting: educational facility; clinical facility or hospital; NDSS related company or business; other as deemed appropriate by the instructor. The student and internship supervisor negotiate a learning contract outlining the internship schedule and specific tasks to be learned and completed. Majors only.

Rules & Requirements

IDEAs in Action Gen Ed: HI-INTERN.

Requisites: Pre- or corequisites, NDSS 500 and 510.

Grading Status: Letter grade.

NDSS 697. Neurodiagnostics and Sleep Science Capstone. 3 Credits.

Students complete a research project and presentation culminating from the undergraduate course of study. Project topics provide students the opportunity to summarize, evaluate, and integrate knowledge gained throughout the undergraduate major. Teaching methods include direct student exposure and significant time spent in a healthcare/clinical/educational environment specific to practice interests. The capstone project is in the form of research, or other scholarly activity that articulates the design, organization, statistics and data analysis used. Majors only.

Rules & Requirements

IDEAs in Action Gen Ed: RESEARCH.

Requisites: Pre- or corequisites, NDSS 440 and 493.

Grading Status: Letter grade.

NDSS 698. Neurodiagnostics and Sleep Science Capstone II. 3 Credits.

This course is a continuation of NDSS 697. Students complete a research project and presentation culminating from the undergraduate course of study. Project topics provide students the opportunity to summarize, evaluate, and integrate knowledge gained throughout the undergraduate major. Teaching methods include direct student exposure and significant time spent in a healthcare, clinical, or educational environment that is specific to practice interests. NDSS majors only.

Rules & Requirements

IDEAs in Action Gen Ed: RESEARCH.

Requisites: Pre- or corequisite, NDSS 697.

Grading Status: Letter grade.